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CIRCULATING FAN SUPPORT

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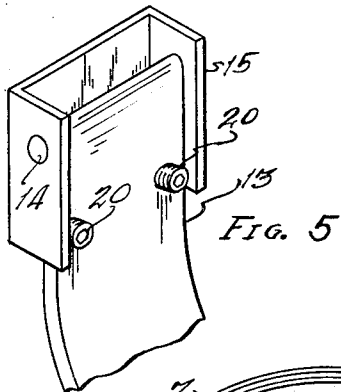


Fig. 5

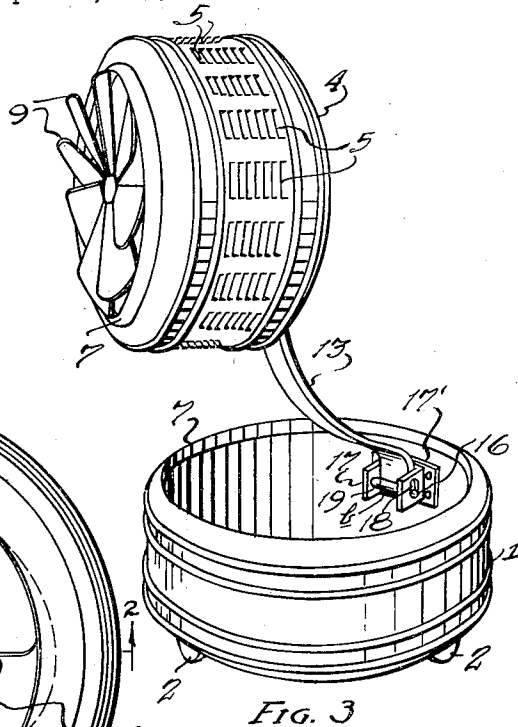


Fig. 3

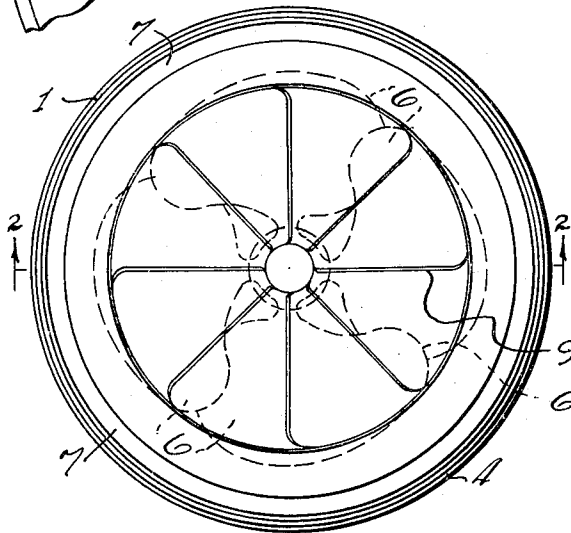


Fig. 1

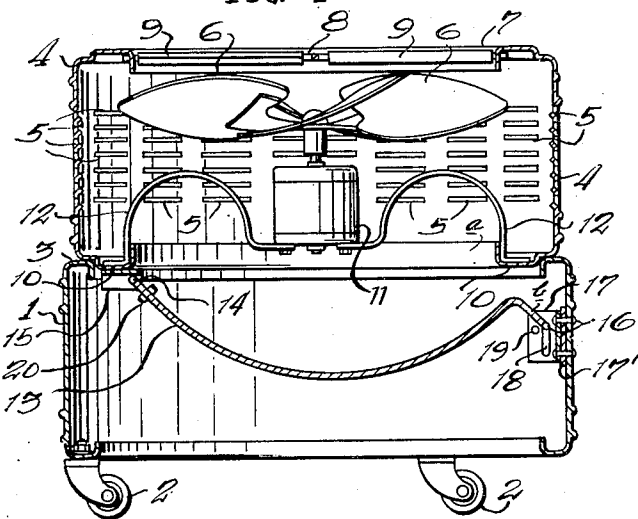


Fig. 2

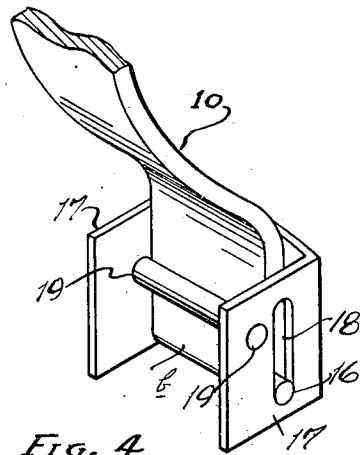


Fig. 4

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## CIRCULATING FAN SUPPORT

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6 Claims. (Cl. 230-273)

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This invention relates to electric air circulating fans and it has particular reference to a portable type of fan capable of considerable flexibility in its adaptations for use, and its principal object resides in the provision of an assembly which is compact and attractive in appearance and is light and portable yet embodying features which adapt it to use as a means of circulating air in a room or building, having the pleasing attribute of blending in with normal furnishings, while capable of being readily adjusted to a vertical position and employed as a ventilator or pedestal fan.

An object of the invention resides in the provision of a convenient, all-purpose fan in which are incorporated certain novel features of construction which renders the invention substantially vibrationless and noiseless while producing maximum results in maintaining comfortable air circulation in either horizontal or vertical position.

Broadly, the invention contemplates the provision of a fan possessing all of the desirable characteristics of a large commercial type cooling fan yet highly compact, light and inexpensive and economical in operation.

While the foregoing objects are paramount, other and lesser objects will become manifest as the description proceeds, taken in connection with the appended drawings wherein:

Figure 1 is a plan view of the invention illustrating the novel louver arrangement and showing the fan blades in dotted lines.

Figure 2 illustrates the invention in vertical cross-section, showing the association of the fan housing and base member in closed position and illustrating the fan mounting.

Figure 3 is a perspective illustration in which the fan and its housing is extended to a vertical position and shows the supporting bracket therefor.

Figure 4 fragmentarily illustrates, in perspective, the locking arrangement of the lower end of the fan supporting bracket, and

Figure 5 fragmentarily illustrates, in perspective, the upper end of the supporting bracket connected to the fan housing and shows the adjusting screws.

The invention comprises a base member 1 which, in its preferred form, is cylindrical and of greater diameter than height for best appearance. A set of casters 2 support the base 1 for movability and the top of the latter is formed to provide a suitable annular seat 3 upon which the fan housing 4 normally rests when the as-

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sembly is in closed position, as in Figure 2. The base 1 and housing 4 are preferably formed from sheet metal affording a substantial but light construction.

The housing 4 may be provided with a plurality of louvered openings or vents 5 uniformly arranged in its walls through which air can be circulated while the fan 6 is in operation. The top or discharge side of the housing 4 is formed with a circular opening 7 and has a closure 8 comprising an arrangement of triangular shaped louvers 9 hinged along one of their long edges and capable of independent operation in the manner illustrated in Figure 3. This type of closure, shown completely closed in Figures 1 and 2, is not only attractive in appearance but affords a means of deflecting the air currents activated by the fan 6 in any desirable manner, whether the assembly is operating in Figure 2 or that shown in Figure 3.

The rear or bottom side of the housing 4, depending upon the position in which the same is operated, is formed with an inwardly extending flange 10 which for the sake of appearance as well as for durability, is upturned at *a* about its inner periphery. The fan motor 11 is supported in the housing 4 by a plurality of springs 12, preferably semi-circular in form, arranged radially of the motor 11, their inner ends being secured to the motor while their outer ends are attached to the flange 10 of the housing 4, as shown in Figure 2. Thus, the motor 11 is literally cushioned so that vibration is minimized regardless of the position in which the fan motor 11 is operated.

The fan housing 4 is hingedly connected to the base 1 by an arcuate spring-like bracket 13 which has pins 14 in one end by which it is pivotally attached to a substantially U-shaped clevis 15 secured to the flange 10, shown in Figure 2, of the housing 4. A detailed illustration of this arrangement is shown in Figure 5. The opposite end *b* of the bracket 13 is turned downwardly at right angles and has pins 16 therein which serve to pivot this end of the bracket 13 to another U-shaped clevis 17 secured to a plate 17' which is, in turn, secured to the inner wall of the base 1 opposite to the pivot 14 in the housing 4. The pins 16 extend into a pair of vertical slots 18 in each wing of the clevis 17, shown in detail in Figure 4, which adapts the end *b* of the bracket 13 to be moved downwardly in the clevis 17 behind a rigid keeper pin 19 extending between the wings of the clevis 17 and therefore support the bracket 13 in a substantially upright position, as in Figure 4.

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In the manner just described the fan housing 4 can be supported for operation in the vertical position shown in Figure 3, the upper end of the bracket 13, in this position, being illustrated in Figure 5. A pair of adjusting screws 20 5 threadedly arranged through the bracket 13 provide means for making slight adjustments, if necessary or desirable, to maintain the fan housing 4 in a true vertical position. It is not contemplated that any adjustment in this nature 10 will be required if properly adjusted when assembled but certain wear may require some slight correction. The tensioned bracket 13, as well as the motor supporting members 12, greatly 15 minimizes vibration and sound to a very negligible degree yet without reducing the efficiency of the fan.

The invention is obviously capable of considerable changes and modifications by persons skilled in the art without departing from the spirit and intent of the invention or the scope of the appended claims. 20

What is claimed is:

1. In a portable electric circulating fan, the combination comprising a cylindrical base member having casters and an annular seat around 25 its upper edge, the said base member adapted to function in a horizontal plane, a fan housing conformably resting upon the said seat in a horizontal position and combined with said base member forming a cylindrical body, a supporting 30 bracket for the said housing adjustably connecting the same to the said base and adapting the same to be extended to an operative vertical position above the said base, and a fan assembly yieldably and operatively supported within the said housing.

2. In a portable electric fan, a cylindrical base member having casters and an annular seat 40 about its upper edge, a louvered fan housing conformably supported on the said seat in horizontal operative position, a supporting bracket hingedly connected to the said fan housing and having a sliding hinged connection with the said base member adapting the said housing to be 45 raised to an extended operative vertical position above said base member, and a fan assembly yieldably supported in said housing.

3. In a portable electric circulating fan, in combination with a cylindrical horizontal base 50 member having casters and an annular seat around its upper edge, a cylindrical fan housing having a hingedly connected supporting bracket having an adjustable hinged connection with the said base, the said housing being adapted to 55

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conformably repose upon the said annular seat in one of its operative positions and be supported by the said bracket in an extended vertical operative position above the said base, a fan assembly mounted in the said housing, and means comprising tensioned brackets yieldably supporting the said fan assembly in said housing.

4. In a portable electric fan having a cylindrical housing, the combination with a cylindrical base member for the said housing having casters thereon and a horizontal annular supporting surface conformable to the said housing, a tensioned supporting bracket hingedly connected at one end to the said housing and having a sliding hinged connection at its opposite end to the said base adapting the said housing to be raised to an extended vertical operative position, a fan assembly mounted in said housing for both horizontal and vertical operation, and yieldable brackets operatively supporting the said fan assembly in said housing.

5. A portable electric circulating fan, in combination, a cylindrical horizontal base member having casters and an annular seat formed about 25 its upper rim, a cylindrical fan housing adapted to be axially supported on said seat, a supporting bracket adjustably connecting said fan housing with said base and adapting said housing to be operatively extended above said base in transverse axial arrangement therewith, and a fan assembly yieldably mounted in said housing. 30

6. In a portable electric circulating fan having a cylindrical housing, a cylindrical base member for said housing having casters and an annular seat for said housing conformably supporting the same in axial alignment, a collapsible supporting bracket connecting said housing with said base providing means for supporting said housing in operative transverse axial arrangement above 40 said base, and a fan assembly mounted in said housing.

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